

R E M A R K S

At the outset, applicants wish to thank Supervisory Primary Examiner Diana Dudash and Examiner Alysia Berman for the courtesies extended during the personal interview held on October 4, 2000 with the undersigned attorney. The Examiners' careful attention to the application on that occasion is sincerely appreciated.

Claims 25-48 were rejected under 35 USC §112, second paragraph, for indefiniteness. The Examiner's well-taken formal criticisms of these claims were borne in mind as points to be corrected in preparing this amendment. Specifically, the claims have been amended in such a manner as to particularly point out and distinctly claim the subject matter regarded by applicants as their invention, and in the manner helpfully suggested by the Examiner in her Official Action. As is reflected in the Examiner Interview Summary (Form PTO-413), it is believed that the accompanying amendment overcomes the outstanding 35 USC §112, second paragraph rejection. Accordingly, it is believed that the rejection of claims 25-48 has been overcome and should not be repeated.

Claims 25-31 and 35-46 were rejected under 35 USC §103(a) as being unpatentable over ROBINSON et al. 5,185,395. It is advanced that it would have been obvious to one of ordinary skill in the art to select optimal parameters such as water percents, weight percents, and ratios of components in the composition taught by ROBINSON et al., with a reasonable expectation of producing a more stable emulsion.

Reconsideration of the above rejection is respectfully requested for the following reasons.

As was explained during the interview, ROBINSON et al. disclose a water-in-oil emulsion of a copolymer of about 10 to 30 weight % AMPS monomer and about 90 to 70 weight % of anionic co-monomers which may be acrylic acid, methacrylic acid, itaconic acid, maleic acid, fumaric acid and betacarboxyethyl acrylate and their salts. In addition to AMPS and anionic monomers, the copolymers may also contain minor amounts of additional monomers such as nonionic monomers for example hydroxyethyl acrylate.

The Examiner's attention is respectfully directed to the fact that the copolymers of ROBINSON et al. are neither branched, nor crosslinked, and that they are intended to be used as components of drilling muds for the recovery of oil.

By contrast, the compositions of the present invention were directed to developing new thickening polymers without using monoacrylamide as monomers to be polymerized, due to the new regulations set out on page 1, line 36 to page 2, line 6 of the specification. The copolymer of ROBINSON et al. simply cannot be used as thickeners, because the property of being branched or crosslinked is an essential characteristic for the polymers, to be able to thicken solutions.

Thus, it is respectfully submitted that a person having ordinary skill in the art would not have arrived at the polymer emulsions of the present application, from the technical teachings of ROBINSON et al.

In responding to the arguments previously advanced by applicants, the Official Action states that in any polymerization reaction, it is reasonable to expect that some branching and cross-linkage will occur. In order to advance prosecution of this application, as was explained during the interview, since the compound of the inverted latex according to the present invention must be cross-linked, claim 25 as amended herein includes the subject matter of claim 32, thereby obviating and rendering moot this particular ground of rejection. Indeed, claim 32 was not rejected under 35 USC §103(a) as being unpatentable over ROBINSON et al.

Claims 25-48 were rejected under 35 USC §103(a) as being unpatentable over the European reference (EP 503853) in view of ROBINSON et al. It is concluded that it would have been obvious to one of ordinary skill in the art to have used a process as taught by ROBINSON et al. to produce the emulsion as taught by the European reference, with a reasonable expectation of producing a stable emulsion.

Reconsideration of the above rejection is respectfully requested for the following reasons.

The European reference discloses a water-in-oil emulsion of a cross-linked copolymer of AMPS and acrylamide in a molar ratio between 85/15 and 15/85, preferably between 70/30 and 30/70, most preferably between 65/35 and 35/65, and especially between 60/40 and 40/60, as is stated on page 3, lines 52-54. This emulsion is used in the manufacturing of topical formulations.

As has been explained above, the polymers of ROBINSON et al. are not thickeners for cosmetics, but useful components of drilling muds for the recovery of oil.

The Examiner's attention is respectfully directed to the fact that the stability, which is taught by ROBINSON et al. is due to a specific choice, namely a combination of two emulsifiers which are sorbitan monooleate plus ABA block copolymers (see the comparison in the examples). The stability is not due to a specific choice of monomers.

Comparative Examples B and C and Example III teach, that a self-inverting emulsion of AMPS methacrylic acid or AMPS acrylic acid is not stable with sorbitan monooleate as the sole emulsifier.

At item 15 on page 5 of the last Official Action, it is advanced that it is reasonable to expect that substitution of acrylamide in the European reference with one of the monomers taught in ROBINSON et al. would result in a suitable copolymer, since both references are directed to the same field of endeavor, namely producing inverse emulsions and are addressing the same problem, namely stability.

It is however pointed out that the technical teaching of ROBINSON et al. is directed towards the preparation of a copolymer emulsion of AMPS and an anionic co-monomer in which the polymerization profile is smooth. Indeed, less than about 1% of coagulum is formed during the polymerization, and the final emulsion remains stable and ungelled after at least two months storage (see column 1, lines 30-36). The

copolymer of ROBINSON et al. may optionally contain some neutral monomer units, but in minor quantities (see column 1, line 65 to column 2, line 3). The problem is to develop an emulsion which does not thicken, because of the intended use which is to be incorporated in drilling mud for the recovery of oil. The solution provided by ROBINSON et al. is, as was pointed out above, a specific mixture of surfactants.

By contrast, the technical problem with which the European reference is concerned is to find polymer emulsions which are able to thicken and stabilize cosmetic emulsions (page 2, lines 20-21).

It is respectfully submitted that a person having ordinary skill in the art, seeking to find polymer emulsions with the same functions as those of the European reference, but which do not contain any acrylamide monomer, and which are able to thicken even at acidic pH, would not have reasonably found any incentive to replace these acrylamide monomers with the monomers disclosed in ROBINSON et al., with an expectation of success in terms of emulsifying power of fatty phases used in the cosmetic area, which are known to be difficult to emulsify.

In any event, in order to advance prosecution of this application, claim 25 as amended herein includes the subject matter formerly recited in claim 28; namely: that the molar proportion of monomer unit having a strongly acidic function ranges from 30 to 90%. Indeed, if one considers the molecular weight of AMPS, which is larger than the molecular

weight of the disclosed anionic monomer units in ROBINSON et al. (column 1, lines 52-64) the feature 10 to 30 weight % AMPS corresponds to less than 30 molar %. Consequently, the copolymers of the present application are clearly outside the scope of the ROBINSON et al. reference. In this regard, it should be pointed out that the molar proportion of monomers in a given copolymer is an essential physical characteristic of the polymer.

In summary, it is respectfully submitted that when considering the applied references collectively, there would be no reason, motivation or suggestion to combine their respective teachings in the manner necessary to achieve the herein-claimed invention. Indeed, the combined teachings of the applied references would not have resulted in a composition or a method of preparing the same, having the characteristic features recited in applicants' independent claims.

Claim 49 was rejected under 35 USC §103(a) as being unpatentable over the European reference in view of ROBINSON et al., and further in view of newly-cited RAWLINGS et al. 5,472,698. The RAWLINGS et al. reference is relied upon as disclosing a cosmetic emulsion composition comprising N-acetyl-L-serine. It is concluded that it would have been obvious to one of ordinary skill in the art to have prepared the composition of the combined references, and add N-acetyl-L-serine, as taught by RAWLINGS et al.

While the RAWLINGS et al. reference may disclose N-acetyl-L-serine, it nevertheless fails to remedy the fundamen-

tal shortcomings of the basic combination of the European reference taken with ROBINSON et al., so as to render the herein-claimed subject matter obvious within the meaning of 35 USC §103.

In view of the recent interview, the present amendment, and the foregoing remarks, therefore, it is believed that this application has been placed in condition for allowance. Entry of the present amendment, reconsideration and allowance on the basis of claims 25-31, 33-49, are accordingly earnestly solicited.

In the event that there are any questions relating to this amendment or to the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

Respectfully submitted,

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